

**REMARKS/ARGUMENTS**

Upon amendment, Claims 1, 3-11, 13-18, 20-45, 62-65, 95-101, 106-113, 117, and 123 are pending in the application. Claim 19 has been canceled without prejudice or disclaimer. Applicants have amended claim 1 to recite that said chemical alteration is selected from the group consisting of alkylation, reduction, and a combination thereof. Support for this amendment can be found throughout the specification, and in particular in at least page 8, lines 19-25. Claims 31, 32, 65, 113, and 117 remain withdrawn. Accordingly, claims 1, 3-5, 7-9, 11, 13-18, 20-33, 65, 113, 117, and 123 will be pending in the application upon entry of the claim amendments presented herein. *No new matter has been added.*

Amendment and cancellation of the claims herein is not/are not be construed as acquiescence to any of the rejections/objections set forth in the instant Office Action and were done solely to expedite prosecution of the application. Applicants hereby reserve the right to pursue the claims as originally filed or similar claims in this or one or more subsequent patent applications.

Applicants appreciate the Examiners withdrawal of the rejections of the claims under 35 U.S.C. §112. However, Applicants request reconsideration of the subject application with respect to the remaining rejections based on the following remarks.

**INITIAL REMARKS**

Applicants previously attempted to clarify the remarks of the prior Office Action related to the language “chemical alteration.” In particular, Applicants provided arguments regarding the chemical and physical nature of solubilization. The outstanding Office Action addresses these arguments and finds them lacking in persuasiveness.

The Office Action points to Page 8, lines 1-5 of the specification which states (in part) “chemical reactions may involve and/or be associated with analysis, e.g. solubilizing, separating, purifying, detecting and or characterizing the molecules.” The Office Action has read this passage to mean that a chemical reaction may involve a chemical transformation or change as a

result of an interaction of chemical entities and may involve solubilizing the molecules. Applicants respectfully argue that this passage merely lists different types of analysis that may be performed on the molecules. As previously argued, the ordinarily skilled artisan would understand, that a physical change, such as solubilization, may occur as a result of a chemical reaction or chemical alteration, but that solubilization on its own, is a *physical* change (and not a chemical change).

Nevertheless, and solely for the purposes of advancing the prosecution, Applicants have amended claim 1 to include the language that the chemical alteration is selected from the group consisting of alkylation, reduction, and a combination thereof. Applicants believe that this clarification clearly shows that mere solubilization alone does not represent a chemical alteration as encompassed by the claims.

#### **Claim Rejections – 35 U.S.C. § 102**

##### ***Claims 1, 3-5, 11, 20-30, 33 and 123 are rejected under 35 U.S.C. §102(b)***

Claims 1, 3-5, 11, 20-30, 33 and 123 are rejected under 35 U.S.C. §102(b) as being anticipated by Lee, et al. (WO 00/70334). The Office Action, on page 3, again sets forth the allegation that WO 00/70334 discloses a method of solubilizing a substance comprising contacting the substance with a surfactant of Applicants' formula I, and that "solubilizing" reads on "enhancing a chemical reaction." Applicants respectfully disagree and traverse the rejection. The Examiner is respectfully reminded that such language was removed from the claim in favor of the language "enhancing chemical digestion, chemical alteration, or a combination thereof... wherein the chemical alteration is selected from the group consisting of alkylation, reduction, and a combination thereof."

Additionally, with respect to the Examiner's "**Response to Arguments**," the Office Action alleges that "solubilization is encompassed by chemical alteration and is anticipated by Lee et al." based on what the Examiner has inferred from the language of the specification. As noted above, Applicants disagree with this statement and respectfully request that the Examiner review Applicants Initial Remarks, which are incorporated herein by reference thereto.

As amended, the claims relate to enhancing chemical digestion, chemical alteration (presently alkylation/reduction) or a combination thereof. It would be clear to the ordinarily skilled artisan that solubilization, a *physical* change, does not involve the digestion, alkylation or reduction of a molecule (or, as previously argued, any other chemical alteration). Nothing in Lee relates to the digestion, alkylation or reduction of a molecule. Indeed, Lee relates only to the solubilizing, analyzing, separating, purifying or characterizing large molecules.

Accordingly, Applicants request withdrawal of the rejection of claims 1-9, 11, 20-30, 33 and 123 under 35 U.S.C. §102(b), and favorable reconsideration

### **Claim Rejections – 35 U.S.C. § 103**

#### ***Claims 1-9, 11-30, and 33 are rejected under 35 U.S.C. §103(a)***

Claims 1, 3-5, 7-9, 11-30, 33 and 123 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lee, *et al.* (WO 00/70334) in view of Zee Yong et al. (Anal. Chem. 2001, 73, 2558-2564) and Nelson (US 6,093,541). Applicants respectfully disagree and traverse the rejection.

To properly determine a prima facie case of obviousness, the Examiner “must step backward in time and into the shoes worn by the hypothetical ‘person of ordinary skill in the art’ when the invention was unknown and just before it was made.” M.P.E.P § 2142. This is important as “impermissible hindsight must be avoided and the legal conclusion must be gleaned from the prior art.” *Id.* Four factual inquiries must be made : first, a determination of the scope and content of the prior art; second, a determination of the differences between the prior art and the claims in issue; third, a determination of level of ordinary skill in the pertinent art; and fourth, an evaluation of evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). Three criteria may be helpful in determining whether claimed subject matter is obvious under 103(a): first, if there is some suggestion or motivation to modify or combine the cited references; second, if there is a reasonable expectation of success; and third, if the prior art references teach or suggest all the claim limitations. *KSR Int’l Co. v. Teleflex, Inc.* No 04-1350 (U.S. Apr. 30, 2007). With regard to the first criterion, the mere fact

that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.3d 690 (Fed. Cir. 1990). “Knowledge in the prior art of every element of a patent claim ... is not of itself sufficient to render claim obvious.” *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *Teleflex, [Inc. v. Ficos N. Am. Corp.]*, 299 F.3d 1313, 1333-34 (Fed. Cir. 2002)]. The issue is whether there is an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *KSR Int’l Co. v. Teleflex, Inc.*

It has been asserted in the Office Action that: (1) Lee teaches a method of solubilizing a substance using a surfactant of the invention and that solubilization reads on the language “chemical alteration”; (2) Zee-Yong et al. teach identification of individual proteins in a complex mixture by MALDI mass spectrometry; and (3) Nelson teaches proteases for use in mass spectrometers.

Applicants have asserted herein above that the teaching of Lee et al. related to solubilization does not anticipate the instantly claimed invention. The Examiner has repeatedly alleged that solubilization is encompassed by chemical alteration and is anticipated by Lee et al. based on what the Examiner has inferred from the language of the specification. As noted above, Applicants disagree with this statement and respectfully request that the Examiner review Applicants Initial Remarks, which are incorporated herein by reference thereto. Nevertheless, the claims, as amended, relate to enhancing chemical digestion, chemical alteration (presently alkylation/reduction) or a combination thereof.

Nothing in Lee, alone or in combination with Zee Yong and Nelson, suggests the instantly claimed method. As described above, solubilization, a physical change, does not involve the digestion, alkylation or reduction of a molecule (or, as previously argued, any other chemical alteration). As such, it would be understood that there is **absolutely no overlap between the prior art and the instantly pending claims**. To that end, the prior art does not teach or suggest all of the claim limitations, nor would there be a reasonable expectation of success in achieving the enhanced chemical digestion, alkylation or reduction of a molecule of the claimed invention based on the physical solubilization of the references cited, alone or in combination. Therefore, Applicants submit that the Office Action has failed to establish a *prima facie* case of obviousness.

As such, Applicants submit that the teachings in WO 00/70334, whether alone or in combination with Zee-Yong et al. and/or Nelson, do not teach or suggest Applicants' claimed subject matter. As such, Applicants respectfully request that the rejections of the claims under 35 U.S.C. § 103(a) should be withdrawn.

***Obviousness-type Double Patenting***

Claims 1, 3-5, 7, 22, 23, and 25-27 are provisionally rejected in view of Application No. 10/169,002. Applicants again request that this provisional rejection be held in abeyance until allowance of the instant claims, but for the obviousness-type double patenting rejection.

**CONCLUSION**

In view of the amendments and remarks made herein, Applicants submit that the application is in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are respectfully requested. If a telephone conference with Applicants' representative would be helpful in expediting prosecution of the application, Applicants invite the Examiner to contact the undersigned at the telephone number indicated below.

Applicants believe that no additional fees are required in connection with this paper other than the fee for the extension of time submitted herewith. Nevertheless, Applicants authorize the Director to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to Deposit Account No. 04-1105, under Order No. 60009(49991).

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